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EXAMINER

MILLER, DANIEL H

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/631,149	Applicant(s) BLANKENSHIP ET AL.	
	Examiner DANIEL MILLER	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 recites a “petroleum based asphalt binder”. No support for this can be for this limitation in the specification.

3. Further, there is no support for a paving system consisting of a petroleum based binder.

4. Merriam Webster online dictionary defines asphalt as a dark bituminous substance that is found in natural beds and is also obtained as a residue in petroleum refining and that consists chiefly of hydrocarbons. As admitted by applicant (remarks 12/18/2007), Bitumen comprises both petroleum and coal based products. Therefore, applicant’s disclosure of an asphalt binder only discloses a binder that can contain both petroleum and coal. It is not clear from the instant disclosure that applicant was in possession of or discloses or recognizes an advantage to a binder that consists of a petroleum based binder to the exclusion of coal based material.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear, nor has applicant defined within the specification, what is meant by a "polymer modified asphalt binder" wherein the polymer is traditionally used to modify an asphalt binder for use in paving surfaces. Since the scope of the claim language is not determinable any binder taught to be used in the art is considered to be a binder traditionally used to modify an asphalt binder for use in paving surfaces.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maier (UK 1448158) in view of Cramwinckel (U.S. 3,822,556).
2. Regarding claim 1, Maier teaches a paved surface having 12% natural sand and bitumen binder (page 1 line 70-75 and page 4 line 5-10).
3. The binder contains asphalt and polyamine (see claim 1). Applicant discloses the uses a polyamide (polymer) additive (remarks 6/6/07), which are similar amine based polymer. Polyamine and Polyamide are generic classes of polymers and neither Maier, nor applicant, teach which specific polymer is used. Further, Regarding claim 2, the binder is considered to be a binder traditionally used to modify an asphalt binder for use in paving surfaces (as claimed).
4. Regarding claim 6, the layer is inherently a substantially impermeable polymer.
5. Maier is silent as to the binder being petroleum based, the selection of binder based on climate, or the stability and fatigue levels of the pavement.
6. Cramwinckel teaches asphalt with a bitumen binder that is impermeable to water with a thickness of 2.5 cm (column 1 line 30-35, column 2 line 45-50).
7. Cramwinckel further teaches that the bitumen binder can be prepared from any suitable material (column 2 line 63-68) and can be adapted to the climate conditions (column 3 line 1-4). Further, regarding claim 6, Cramwinckel further teaches the asphalt is impermeable to water (column 1 line 30-35).
8. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Maier to incorporate a binder that would be appropriate for applications under particular climates as taught by Cramwinckel. Further, it would have

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been obvious to one having ordinary skill in the art at the time of the invention to adjust the composition of the aggregate, including choosing from coal and/or petroleum based binders, in order to optimize the stability fatigue level, and resistance to reflective cracking of the pavement for the intended application and to maximize the suitability of the material for particular climates. Since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

9. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maier in view of Cramwinckel (U.S. 3,822,556) as applied to claim 1, and further in view of Malloy et al (U.S. 6,669,773).

10. Maier teaches a paved surface having 12% natural sand and bitumen binder (page 1 line 70-75 and page 4 line 5-10).

11. However, Maier in view of Cramwinckel, discussed above, are silent as to the aggregate asphalt comprising less than 10% or 5% natural sand.

12. Malloy teaches a synthetic lightweight aggregate (SLA) used as a substitute for sand in paving construction (column 1 line 10-20; column 9 line 10-25). The aggregate has the advantage of being a cheaper recycled material and favored in applications where weight is a concern (column 1 line 26-33 and 48-54).

13. Therefore, since it was known at the time of the invention to use a less sand in an asphalt pavement application it would have been obvious to one of ordinary skill in

the art to replace all or some of the sand because it can be cheaper and provide a lower density aggregate.

14. It would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the composition of the aggregate, including adjusting the percentage of sand in order to optimize the stability and fatigue, and level and resistance to reflective cracking of the pavement for the intended application and to maximize the suitability of the material for particular climates. Since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Response to Arguments

15. Applicant's arguments filed 12/18/2007 have been fully considered but they are not persuasive.

16. Applicant's claim includes less than 15% natural sand and asphalt binder, which is consistent with the prior art of Maier. Applicant has not offered any substantive reasoning as to why Maier would not possess similar characteristics as it meets all structural limitations set forth in the claim.

17. Applicant asserts that the binder of Maier is coal based and that the binder of applicant's invention is petroleum based and therefore chemically and structurally different.

18. However, the examiner can find no teaching in Maier that discloses the binder is coal based only.

19. The fact that one exemplary embodiment from the disclosure of Maier may contain coal does not mean that the disclosure of Maier is limited to coal containing embodiments.

20. Further, there appears no support in the instant specification for the asphalt binder being petroleum based (see 112 rejection above).

21. The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997) ("An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness."). See MPEP § 716.01(c) for examples of attorney statements which are not evidence and which must be supported by an appropriate affidavit or declaration.

22. Applicant argues there is no motivation to combine the references of Maier in view of Cramwinckel.

23. Regarding the 103 rejection in view of Cramwinckel (U.S. 3,822,556), the motivation to combine is found in the teaching that it is known to choose binders based upon the various climate conditions in outdoor aggregates, such as asphalts.

24. Applicant admits that the Cramwinckel reference would look to "road building material" for application to his liner (page 6 remarks 6/6/07). Therefore, it would have been obvious to combine the teachings of Maier in view of Cramwinckel since both are

asphalts, in contact with the earth, and exposed to outside elements (see abstract Cramwinckel and Malloy generally).

25. Regarding the 103 rejection in view of Malloy et al (U.S. 6,669,773), Malloy teaches a synthetic lightweight aggregate (SLA) used as a substitute for sand in paving construction (column 1 line 10-20; column 9 line 10-25). Therefore, it is known in the art to adjust the percentage of sand in order to provide a cheaper aggregate having lower density favored in applications where weight is a concern (column 1 line 26-33 and 48-54).

26. Regarding the 112 1st rejection of claims 1-8, Merriam Webster online dictionary defines asphalt as a dark bituminous substance that is found in natural beds and is also obtained as a residue in petroleum refining and that consists chiefly of hydrocarbons. As admitted by applicant (remarks 12/18/2007), Bitumen comprises both petroleum and coal based products. Therefore, applicant's disclosure of an asphalt binder only discloses a binder containing both petroleum and coal and at no point discloses or recognizes an advantage to a binder that consists of a petroleum based binder to the exclusion of coal based material. Therefore, the 112 rejection is maintained.

27. A new 112 second paragraph rejection has been made over claim 2 with respect to the amended claim language (see above).

28. Applicant's further arguments are moot in view of newly asserted basis for rejection necessitated by amendment.

Conclusion

29. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **DANIEL MILLER** whose telephone number is (571)272-1534. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571)272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Miller

/KEITH D. HENDRICKS/

Supervisory Patent Examiner, Art Unit 1794